CAISO's Revised Transmission Planning Process

Lorenzo Kristov, Ph. D.
Principal
Market and Infrastructure Development Division

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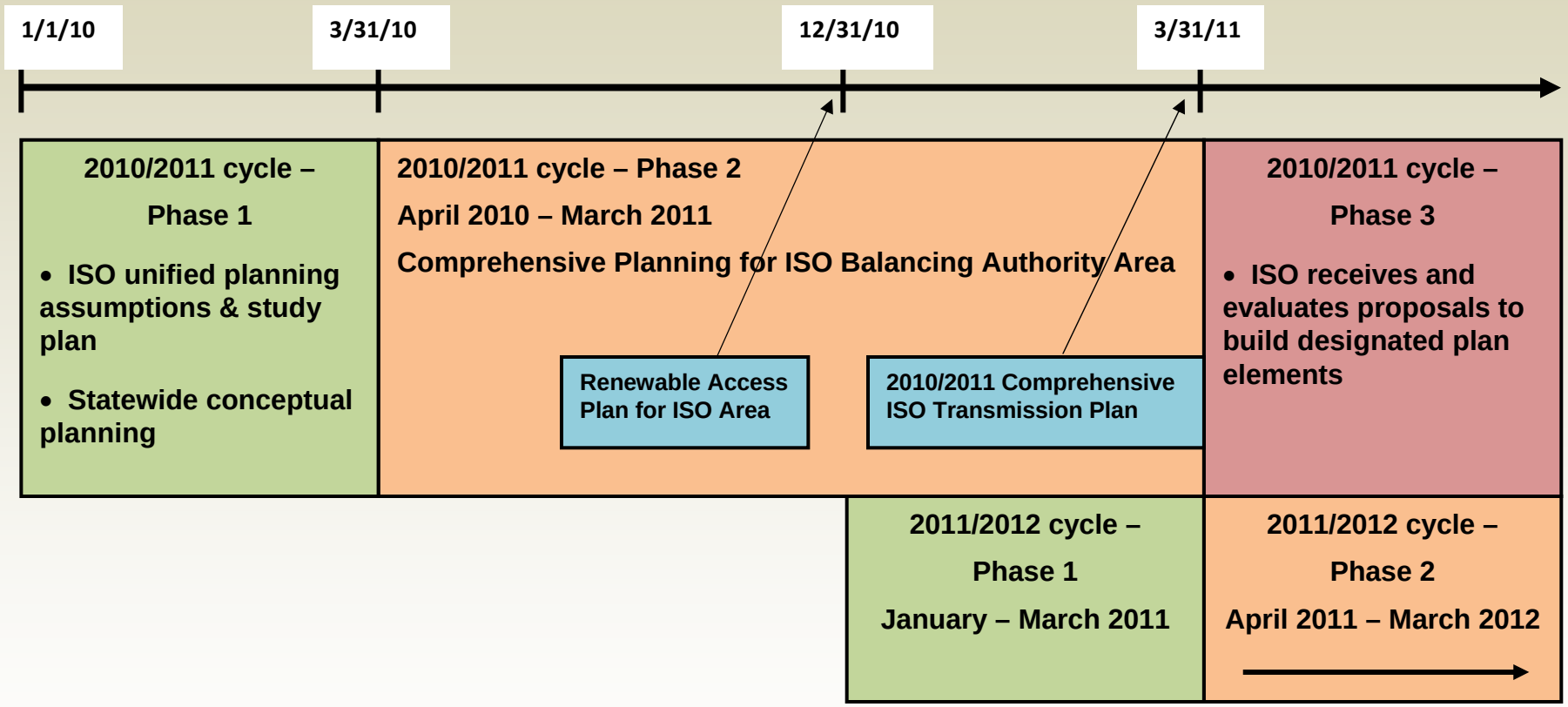
Outline of Presentation

- Brief overview of RTPP proposal
- Focus on major components and issues
  1. Categories of transmission projects
  2. Comprehensive planning approach of RTPP
  3. 2008-09 request window projects
  4. Competitive solicitation – opportunities for non-incumbents
  5. Coordination with generator interconnection process
  6. New public policy-driven category
  7. Identification of economically needed elements
  8. Stakeholder input, statewide conceptual plan, CTPG
  9. Criteria for selecting among competing proposals
  10. Proposed phases 2-3 time lines
  11. Compliance with Order 890

RTPP motivation and objectives

- Environmental policies are driving new generation and may require new transmission
  - California's 33% by 2020 renewable portfolio standard
  - Traditional planning approach is not well suited to these needs
- Objectives
  - Define new "public policy driven" transmission upgrade category
  - Plan the ISO grid comprehensively – address all needs with the most cost-effective comprehensive plan
  - Balance need for timely transmission expansion against risk of stranded investment for ratepayers
  - Consider statewide and regional perspectives for planning
  - Maintain full compliance with Order 890

Timeline of annual three-phase RTPP cycle



Some terminology of RTPP

- "Projects" and "elements" in the comprehensive plan
  - Project = Specific transmission facility(s) to be built or upgraded, **with** an identified, approved project sponsor to build and own it
  - Element = Specific transmission facility(s) to be built or upgraded, **without** an approved project sponsor, to be open for competitive solicitation
- RTPP planning cycle designation reflects the calendar years it spans
  - "2011/2012 cycle" starts in January 2011 (Phase 1) and completes final comprehensive plan in March 2012 (Phase 2)

Categories of transmission upgrades and additions – 1

Category	Criteria for identifying project or element	Entity that builds and owns approved project	Relevance to or impact of RTPP Filing
1. Reliability (RTPP §24.4.6.2)	Needed to meet Applicable Reliability Criteria and ISO Planning Standards ISO determines most cost-effective solution to identified reliability need	PTO with a PTO Service Territory where addition or upgrade is to be located	No change proposed
2. LCRI Facility (RTPP §24.4.6.3)	Radial (non-network) gen-tie to connect 2 or more LCRI Generators in an Energy Resource Area, with at least one resource owned by an entity that is not an affiliate of another owner Cost first funded via TAC, then allocated to generators as they come on line; when line is fully subscribed no cost remains in TAC	PTOs	No change proposed
3. LT-CRR feasibility (RTPP §24.4.6.4)	Project is needed to ensure feasibility of outstanding LT-CRR for their full term	PTO with a PTO Service Territory where addition or upgrade is to be located	No change proposed
4. Merchant	Project sponsor must bear all costs and mitigate any reliability impacts to ISO grid	Project sponsor	No change proposed

Categories of transmission upgrades and additions – 2

Category	Criteria for identifying project or element	Entity that builds and owns approved project	Relevance to or impact of RTPP Filing
5. Generator interconnection (current tariff App. Y and Z)	Reliability Network Upgrade to a PTO's system, at or beyond the Point of Interconnection, identified in Interconnection Studies as needed to interconnect the generator safely and reliably to PTO's system Deliverability Network Upgrade to a PTO's system, at or beyond the Point of Interconnection, identified in Interconnection Studies as needed in addition to identified Reliability Network Upgrades, to relieve constraints on ISO Controlled Grid and provide Full Capacity deliverability status for generator to provide resource adequacy capacity	PTO to whose system the generator will interconnect or whose system is impacted by the interconnection	In some instances, RTPP may expand or modify a network upgrade identified in the LGIP Phase 2 cluster
6. Public policy-driven (RTPP §24.4.6.6)	Needed to meet state or federal public policy objectives specified in RTPP Study Plan ISO will apply "least regrets" approach to minimize risk of stranded investment	Approved sponsor chosen through open competitive solicitation	RTPP proposes to create this new category

Categories of transmission upgrades and additions – 3

Category	Criteria for identifying project or element	Entity that builds and owns approved project	Relevance to or impact of RTPP Filing
7. Economic transmission (RTPP §24.4.6.7)	Needed to address (1) congestion identified in ISO congestion study, (2) Local Capacity Area Resource Requirements, (3) congestion projected to increase over the planning horizon, (4) integration of new generation or loads on an aggregated or regional basis. ISO considers degree to which benefits exceed costs; benefits include reduction in production costs, congestion costs, transmission losses, supply or capacity costs resulting from improved access to cost-efficient resources. ISO identifies needs via economic studies of expanded ISO grid comprised of existing grid plus previously approved projects and new elements 1-6 on previous slides.	Approved sponsor chosen through open competitive solicitation	RTPP removes current tariff provision that gives PTOs right to build unsponsored ISO-identified projects RTPP eliminates project sponsor submission of economic project proposals with right to build if project is approved

RTPP's comprehensive planning approach

Comprehensive plan for the ISO area is built as follows:

- Start with baseline plan from unified planning assumptions
  - Includes projects approved in prior planning cycle or in LGIAs
- Incorporate conventional categories of upgrades
  - Needed reliability projects based on ISO studies and proposals by PTOs and other parties
  - LT-CRR feasibility, merchant and LCRI projects
  - LGIP phase 2 cluster study network upgrades that will not be reevaluated in the RTPP
- Identify and incorporate policy-driven elements
  - Consider statewide conceptual plan results
  - Consider stakeholder comments and project suggestions
  - Study selected additional generation scenarios
  - Consider enhancing larger LGIP network upgrades
- On basis of above elements, perform economic congestion studies and identify beneficial economically-driven elements

Economic project proposals submitted into the 2008 and 2009 request windows

- RTPP retains sponsor's right to build a project submitted into 2008 or 2009 request window and included in comprehensive plan
- Projects were submitted by both PTOs and non-incumbent-PTO developers
- Under RTPP a project could be approved and built by the sponsor:
  - If it aligns with policy-driven element of comprehensive plan; or
  - If it has net economic benefits when assessed against "preliminary" comprehensive plan comprised of all other categories of needed projects and elements
- Under current tariff, 2008 and 2009 proposed economic projects must have net economic benefits to be approved

Competitive solicitation to build and own policy-driven and economic elements

- RTPP expands competitive opportunities for non-incumbent PTOs
- After Board approves comprehensive plan, ISO will conduct open solicitation to build policy-driven and economic elements
- For all submitted proposals ISO will review sponsor qualifications and consistency of proposal with plan specs and applicable standards
- For an element where two or more qualified proposals are submitted and sponsors seek siting approval from different authorities, ISO will select and approve one proposal for rate-based cost recovery
- ISO review of sponsor qualifications and selection among competing proposals are modeled after PUC Texas process and criteria
  - ISO will consider a sponsor's entire scope of project commitments in assessing sponsor's capability
  - ISO considering use of expert consultant to assist this effort
- For an element where no qualified proposal is submitted, ISO may conduct another solicitation or exercise PTO obligation to build

Coordination with interconnection process – 1

- GIP and RTPP are separate processes with key inputs from each to the other
  - GIP phase 2 cluster study identifies network upgrades needed for reliable generator interconnection and deliverability
    - Also caps generator's upfront funding and collateral requirements
  - Starting 2011/12, GIP network upgrades above size and cost thresholds are identified for further assessment in the RTPP
    - New transmission line > 200 kV with cost > $100 million
    - New 500 kV substation with cost > $100 million
    - Capital cost > $200 million
  - For any such GIP upgrade, RTPP assessment may:
    1. Leave network upgrade unchanged
    2. Retain the upgrade but modify some details
    3. If modified, may create need for other related network upgrades

Coordination with interconnection process – 2

- GIP and RTPP are separate processes with key inputs from each to the other. Referring to previous slide:
  - Items 1 and 2 are built by PTOs as elements in the LGIAs
  - For item 3, additional upgrades are added to comprehensive plan
    - If the additional upgrades are policy or economic they are included in competitive solicitation
  - In all cases, generator cost and collateral responsibility does not increase due to RTPP
- Coordination of study assumptions
  - Network upgrades in completed LGIAs are included in unified planning assumptions for next RTPP cycle
  - Final RTPP comprehensive plan, once approved by Board, is assumed for next GIP cluster study cycle

Public policy-driven elements

- Create new category because needed transmission may not address identified reliability or economic need
- ISO will identify public policy objectives during stakeholder process at beginning of each RTPP cycle
  - State's 33% by 2020 RPS is key policy requirement this cycle
- Challenge is uncertainty about where and when all needed new generation will be built => ISO must balance two objectives:
  - Ensure required transmission is in service when needed
  - Minimize risk of under-utilized capacity and stranded investment
- Use "least regrets" approach to identify needed elements
  - Identify and approve "category 1" transmission elements needed under multiple generation development scenarios
  - Identify "category 2" elements for reconsideration in next cycle
- Policy-driven transmission may offset future GIP-driven upgrades

Economically-driven elements – 1

- Per existing TPP a sponsor can submit an economic project proposal into the annual request window
  - Proposal need not respond to previously identified need
  - Must pass cost-benefit assessment to be approved
  - Project sponsor who submitted it gets right to build and own it
  - PTO has right of first refusal for ISO-identified economic project
- Existing approach does not support comprehensive, cost-effective planning or competitive solicitation
- RTPP separates “what to build” from “who will build”
  - ISO considers all ideas in comprehensive planning process
  - Submission of a project idea does not convey a right to build (RTB)
  - Comprehensive plan includes elements that address identified needs
  - Eliminates existing PTO ROFR for ISO-identified economic projects
  - Open, competitive solicitation to build and own
  - Approach maximizes potential benefits to ratepayers

Economically-driven elements – 2

- Maintaining request window and sponsors' right-to-build (RTB) for economic project proposals has problems
  - RTB creates perverse incentives to submit as many projects as possible
    - Cost of proposals is low relative to potential profits
    - Invites parties to submit who may not be qualified to become PTOs
    - Increases ISO's costs to study projects that are not needed
  - RTB provides no incentives for sponsor to improve project design or commit to cost cap to increase ratepayer benefits
  - If multiple submissions with RTB are similar to a plan element, any ISO selection process to pick "closest" submitted proposal will be difficult and subject to costly disputes and delays
- RTPP approach increases competition, ratepayer benefits, and opportunities for independent developers
  - Independents have strong incentives to offer good ideas into RTPP stakeholder process: if an idea is adopted, sponsor will be strong contender in competitive solicitation
  - Texas PUC and independent developers recognized benefits of open solicitation and how it promotes participation and innovation

RTPP provides substantial opportunities for stakeholder engagement and input

- Four rounds of stakeholder meetings and comments per planning cycle
  - Phase 1 – Q1/Year 1 – develop unified planning assumptions and study plan; accept economic study requests; identify and discuss public policy requirements to be addressed in planning
  - Phase 2 – Q3/Year 1 – discuss reliability study results and reliability project proposals; LT-CRR feasibility needs and proposals; LCRI and merchant project proposals; results of GIP phase 2 cluster study and network upgrades identified for RTPP reassessment; statewide comprehensive plan
  - Phase 2 – Q4/Year 1 – conduct status meeting to review preliminary ISO results of policy-driven assessment, and economic studies if available
  - Phase 2 – Q1/Year 2 – discuss and comment on draft final comprehensive transmission plan prior to presentation to Board for approval
- Annual open comment periods in Phases 1-2 to accept transmission upgrade ideas and comments on statewide conceptual plan from all parties, for ISO consideration in formulating comprehensive plan

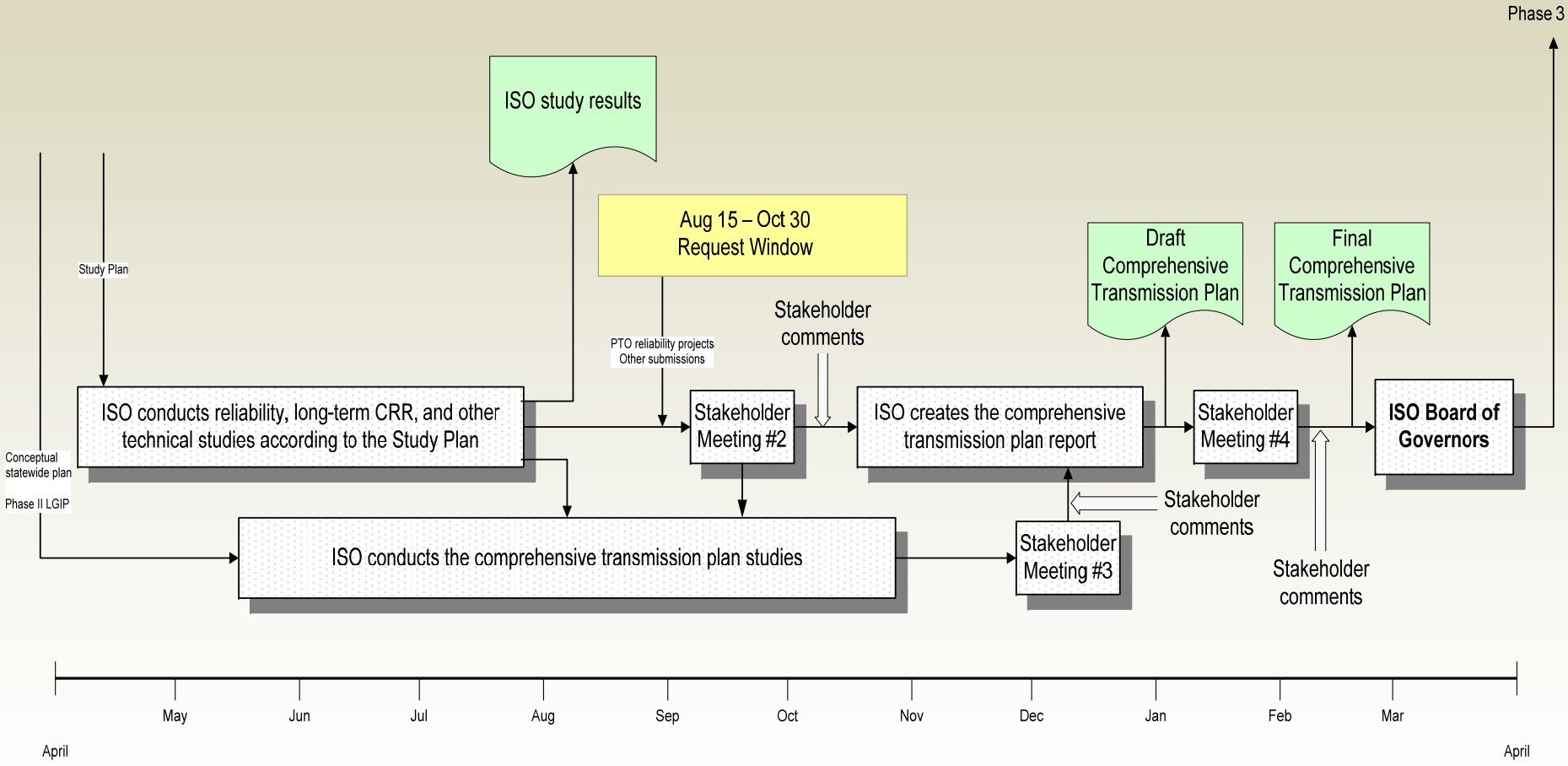
Statewide conceptual plan and CTPG

- Statewide conceptual plan in general
  - A vehicle to look at transmission needs for the state as a whole
    - Particularly important where public policy drivers affect entire state
  - May be as thorough as a collaborative process among all California transmission providers when possible, or as simple as an ISO compilation of best available information on the other providers' plans
  - Informational only; does not determine facilities to be included in ISO's comprehensive plan; decision making is under ISO's 890-compliant RTPP
- California Transmission Planning Group (CTPG)
  - Formulated statewide conceptual plan for 2010/11 cycle, based on three rounds of studies, reports and public discussion
  - CTPG conducted open transparent process in developing study plans and providing results
  - Bottom line: CTPG plan is conceptual; projects identified in CTPG studies get no preference, do not determine elements of ISO's comprehensive plan, nor detract from RTPP's adherence to Order 890.

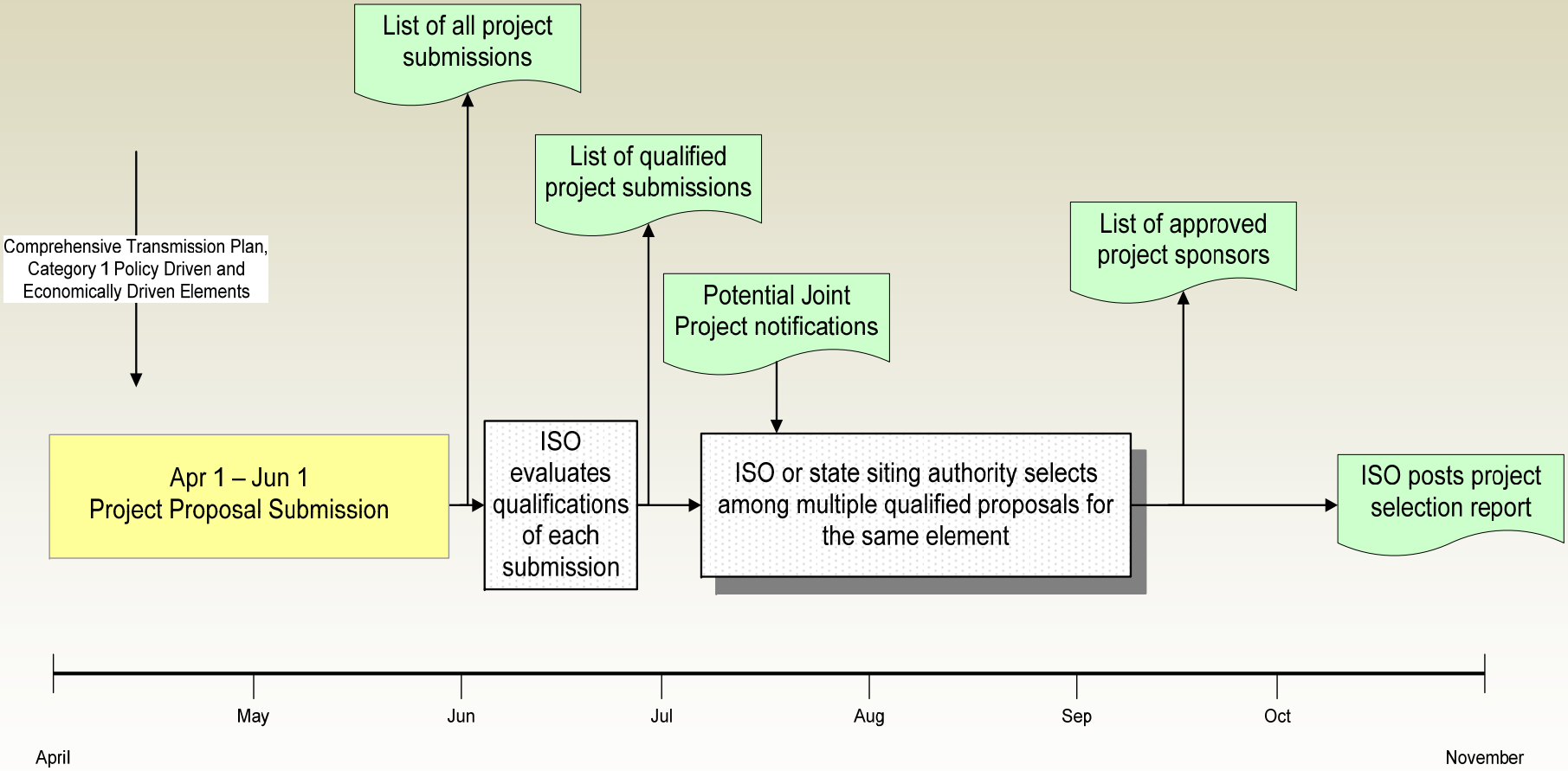
Selecting among competing proposals

- ISO evaluates all proposals submitted in Phase 3 for sponsor qualification and consistency with comprehensive plan requirements (RTPP §24.5.2.1)
- If multiple sponsors propose to build same plan element and seek siting approval from different authorities, ISO selects and approves one for rate-based cost recovery (RTPP §24.5.2.4)
  - Maximize ratepayer benefits by assessing sponsor advantages in completing project most cost-effectively
  - Filed tariff lists specific criteria for evaluating proposals
  - Modeled after Texas PUC process design and criteria
  - Does NOT utilize sponsor's cost estimates as these are typically unenforceable and later revised, unless sponsor commits to a binding cost cap

RTPP phase 2 time line



RTPP phase 3 time line



Compliance with Order 890 – 1

- Current transmission planning process complies with Order 890
- RTPP preserves Order 890 compliance elements of current process, with some modifications and enhancements
  - Coordination
    - Stakeholder meetings increased from 3 to 4
    - Meeting notices and meeting milestone dates are unchanged
    - Continued participation in regional and sub-regional planning groups and coordination with neighboring BAAs
    - Conceptual statewide plan may be developed in coordination with regional planning groups and neighboring BAAs
  - Openness
    - Provisions regarding RTPP participants, access to and criteria for identifying confidential data or CEII are unchanged

Compliance with Order 890 – 2

- Transparency
  - Annual RTPP phases and schedule differ from the current process, but stakeholders have same input opportunities at each stage
  - Stakeholders may provide input on preliminary study results, draft study and transmission plans as well as the conceptual statewide plan
  - Milestones for stakeholder review and comments on documents are unchanged
- Information Exchange
  - Numerous opportunities for transmission providers and customers to submit data
  - RTPP has new requirements for information submission during the Phase 3 project sponsor selection process
- Comparability
  - As under the current process, RTPP provides all market participants with the same opportunities, obligations and responsibilities
  - Under RTPP ISO will consider demand response, generation and other non-transmission solutions, as appropriate

Compliance with Order 890 – 3

- Dispute Resolution
  - RTPP does not change the ISO dispute resolution procedure
- Regional Participation
  - RTPP does not amend the existing tariff provisions for sub-regional and regional planning
  - Development of statewide plan and collaboration with CTPG furthers regional participation goal
- Economic Planning Studies
  - Economic planning study requests can be submitted during Phase 1 of RTPP as study plan is developed (starting 2011/2012 planning cycle)
- Cost Allocation
  - Costs of approved policy-driven projects will be recovered through existing cost allocation process
  - Cost recovery for other categories of transmission remains unchanged

Conclusion

- Environmental policies are driving new generation and may require new transmission
  - California's 33% by 2020 renewable portfolio standard
  - Traditional planning approach is not well suited to these needs
- Objectives
  - Define new "public policy driven" transmission upgrade category
  - Plan the ISO grid comprehensively – address all needs with the most cost-effective comprehensive plan
  - Balance need for timely transmission expansion against risk of stranded investment for ratepayers
  - Consider regional and statewide perspectives for planning
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